

receiving an electronic message from a message sender, the electronic message having at least one designated electronic delivery address associated therewith; transmitting the electronic message to said designated address;

receiving electronic delivery status notification information regarding delivery of the
5 electronic message to the designated address;

computing a message authentication code corresponding to at least the message;
assembling a copy of at least a portion of the message, the electronic delivery status notification information, and the message authentication code, said assemblage defining an electronic receipt; and

10 transmitting the receipt to a storage means.

2. (Original) The method of claim 1 wherein transmitting the receipt to a storage means comprises transmitting the receipt to the message sender.

15 3. (Original) The method of claim 2 further comprising the step of discarding the original message after transmitting the electronic receipt to the sender.

4. (Original) The method of claim 1 further comprising at a later time:
receiving a purported receipt and a purported message authentication code associated
20 therewith;
determining that the purported message authentication code corresponds to the message;
and

providing sworn testimony verifying content and delivery of the message to the addressee.

5 5. (Original) The method of claim 1 wherein said sworn testimony is provided for a fee.

6. (Original) The method of claim 1 wherein the message authentication code corresponds additionally to delivery status and delivery time information.

10 7. (Original) The method of claim 1 wherein the step of computing an authentication code comprises:

 computing a first message digest corresponding to at least a body of the message;

 computing a second message digest corresponding to an attachment to the message;

 computing an overall message digest corresponding to said first and said second message

15 digests; and

 encrypting said overall message digest to create a digital fingerprint.

8. (Original) The method of claim 1 wherein computing a message authentication code comprises:

20 using a secure hashing algorithm, computing a message digest corresponding to at least the message and the electronic delivery status notification information.

9. (Original) The method of claim 1 wherein said transmitting step comprises:
establishing a direct telnet connection with an e-mail server associated with the
destination address; and
transmitting the message directly to said e-mail server.

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10. (Original) The method of claim 1 further comprising the step of tagging the
message to indicate that it has been registered with a third party prior to said step of transmitting
the message to said designated address.

E 10 11. (Original) The method of claim 1, wherein:
said step of receiving an electronic message comprises receiving the electronic message
as an e-mail cc; and
the electronic delivery address is determined by examining a delivery address designated
within a header associated with the message.

15 12. (Original) A method of providing proof regarding the delivery and content of an
electronic message, comprising:

receiving from a sender across a computer network an electronic message, said message
having a delivery address associated therewith;

20 sending said message electronically to a destination corresponding to said delivery
address;

receiving delivery status notification information associated with said message and said
delivery address;

providing to said sender:

a substantial copy of said message;

said delivery status notification information; and

a message digest computed substantially from said message copy and said delivery status

5 notification information; and

at a future date receiving electronically said electronic receipt from said sender, verifying

that said message digest corresponds to said message, and verifying that said message was

E 1 received by an electronic message handler associated with said delivery address.

10 13. (Original) An electronic message server programmed to implement the method of claim 12.

14. (Original) A computer readable memory capable of causing a computer to implement the method of claim 12.

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15. (Original) The method of claim 12 further comprising:

sending said message to a plurality of additional destinations corresponding to additional delivery addresses associated with the message;

receiving additional delivery status notification information associated with said message

20 and said additional delivery addresses; and

sending a delivery verification message to the sender, the delivery verification message including:

a list of all of said addresses; and

said delivery status notification information respectively corresponding to all of said addresses, said delivery status notification information including for each addressee a listing of whether or not delivery was successful and, if delivery was successful, the date and time at which delivery occurred.

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16. (Original) The method of claim 12 wherein said computer network is the Internet and said electronic message is an e-mail message.

E) 10 17. (Original) The method of claim 12 wherein the step of sending said message electronically to a destination corresponding to said delivery address comprises: establishing direct communication to a recipient electronic message server corresponding to said destination; and

15 sending said electronic message directly to said recipient electronic message server; and verifying that said recipient electronic message server reported receiving said electronic message without errors.

18. (Original) The method of claim 17 wherein said direct communication comprises a telnet connection across the Internet.

20 19. (Original) The method of claim 12, wherein said message digest is encrypted.

20. (Original) The method of claim 12, further comprising:
for a fee, providing sworn testimony verifying content of said message and receipt
thereof at said delivery address.

5 21. (Original) The method of claim 12, wherein said message digest includes:
a first message digest computed according to a body of said message; and
a second message digest computed according to an attachment to said message.

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10 22. (Original) The method of claim 12, wherein said message digest comprises a first
message digest computed according to a body of said message and at least one electronic
attachment to said message.

23. (Original) A method of verifying delivery of an electronic message to a plurality
of destinations, comprising:

15 receiving an e-mail message; said e-mail message including a plurality of destination e-
mail addresses associated therewith and a message originator address associated therewith;

forwarding said message to said plurality of addresses;

providing a report to said message originator, the report listing whether the message was
successfully transmitted to a computer associated with each respective destination address, and if
20 the message was successfully transmitted, the date and time at which the e-mail was successfully
received by the computer associated with the respective destination address.

24. (Original) The method of claim 23 wherein the message is received from the sender across the Internet; the report is sent to the sender across the Internet, and wherein the method further comprises:

charging a fee to said message originator.

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25. (Original) A method of verifying delivery of an electronic message, comprising:
in a computer system, receiving an electronic message from a message sender for routing
to a destination address;

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establishing communication with an electronic message server associated with the

10 destination address, said server defining a destination server;

querying said destination server to determine whether said destination server supports
delivery status notification (DSN) functionality;

receiving a response to said query, said query and response together defining an
SMTP dialog;

15 requesting delivery status notification information from said destination server according
to results of said SMTP dialog;

transmitting said electronic message to said destination address;

receiving DSN information from said destination server with respect to delivery of said
electronic message; and

20 providing to said message sender at least a portion of said SMTP dialog, and at least a
portion of said DSN information.

26. (Original) The method of claim 25, wherein the providing step includes composing an electronic receipt, said electronic receipt including:

a copy of said electronic message;

at least a portion of said SMTP dialog and at least a portion of said DSN information; and

5 a message authentication code corresponding to content of said receipt.

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27. (Original) A method of verifying content of a received electronic message, comprising: registering a designated server as the recipient for messages addressed to e-mail addresses at a plurality of top level domains;

10 receiving an electronic message addressed to a first e-mail address within said plurality of top level domains;

generating a message authentication code corresponding to content of said received message and delivery information associated with said message;

15 providing the message and the message authentication code to a recipient associated with said first e-mail address;

at a later time, verifying that said message digest corresponds to said message and delivery information.

28. (Original) The method of claim 27 wherein said message authentication code
20 comprises an encrypted message digest.

29. (Original) The method of claim 27 wherein said providing comprises POP mail service.

30. (Original) The method of claim 27 wherein said message authentication code and said message are combined into a single delivered message provided to said designated addressee.

5 31. (Original) A method of verifying delivery and reading of an electronic message, comprising:

receiving an electronic message across the Internet from a message sender, said message including an electronic destination address;

E¹ forwarding said message to a destination server associated with said destination address;

10 requesting delivery status notification from said destination server;

receiving confirmation from said destination server that said message was received;

sending to the message sender at least one receipt, said at least one receipt including:

delivery information, said delivery information including the time at which the message was received;

15 read notification information regarding when a user at said destination address opened said electronic message for reading; and

at least one message authentication code corresponding to the message, the delivery information, and the read notification information.

20 32. (Original) The method of claim 31 wherein said at least one receipt comprises: a first receipt, said first receipt comprising said delivery information and a first message authentication code associated therewith; and

a second receipt, said second receipt comprising said read notification information and a second message authentication code associated therewith.

33. (Original) A method of verifying that an electronic message was sent,
5 comprising:

generating an electronic message for a recipient from information received from a message originator;

sending the electronic message to the recipient;

generating a message digest corresponding to content of the electronic message;

10 encrypting the message digest; and

21 sending the electronic message and the encrypted digest to the message originator.

34. (Original) The method according to claim 33, further comprising: tracking delivery status notification of the message;

15 appending the delivery status notification to the electronic message; and storing the appended delivery status notification for later verification if needed.

35. (Original) The method according to claim 33, wherein the electronic message is sent to the recipient through a computer network.

20 36. (Original) The method according to claim 35, wherein the computer network is a wide area network.

37. (Original) The method according to claim 35, wherein the computer network is the Internet.

38. (Original) A method of later proving that an electronic message was previously
5 sent to a recipient, comprising:

receiving from an independent party an electronic message, and further receiving an address corresponding to an intended recipient of the message;

creating a validation code corresponding to the message;

transmitting the validation code to a storage means for storage thereat; and sending the
10 message to the recipient.

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39. (Original) The method of claim 38 wherein said storage means comprises said independent party.

15 40. (Original) The method according to claim 38 wherein said storage means comprises an on-site memory device.

41. (Original) The method according to claim 38 wherein said validation code is a message digest.

20 42. (Original) The method according to claim 41 further comprising: encrypting the message digest;

creating a receipt, the receipt including the encrypted message digest; and forwarding the receipt to the independent party for later verification if needed.

43. (Original) A method of establishing whether a message was electronically
5 received by a recipient, comprising:
providing a message to be dispatched electronically along with a recipient's address from
a sender;
dispatching the message electronically to the recipient's address;
upon receiving a delivery status of the message, generating a receipt, the receipt
10 including:
a copy of the message;
a digital signature associated with the message; and
the delivery status for the message; and
providing the receipt to the sender, for later establishing that the message was
15 electronically received by the recipient.

44. (Original) The method of claim 43 wherein the digital signature is an encrypted
message digest.

20 45. (Original) The method of claim 43, wherein the message is an e-mail message.

46. (Original) The method of claim 43, wherein the digital signature is a message
digest corresponding to the message.

47. (Original) The method of claim 43, wherein the message is dispatched via the Internet.

48. (Original) The method of claim 43, wherein the message is provided by logging
5 onto a registrant's server to create an e-mail message for the recipient.

49. (Original) The method of claim 43, wherein the status of the message is a
Delivery Status Notification.

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10 50. (Original) The method of claim 43, wherein tracking for the delivery status of the
message dispatched is done for a period of up to about 24 hours.

51. (Original) The method of claim 43, wherein tracking for the delivery status of the
message occurs for more than about 24 hours, and the receipt records that delivery of the
15 message is a delivery failure.

52. (Original) The method of claim 43, wherein the receipt further includes the time
that the message was received at the recipient's address.

20 53. (Original) The method of claim 43, wherein the message includes an attached
file, and wherein the method further comprises:

creating a message digest associated with the attached file; and

encrypting the message digest;

and wherein said dispatching step includes dispatching the message including the attached file.

54. (Original) The method of claim 43, further including: sending the receipt to the sender of the message.

55. (Original) The method of claim 43, further comprising: requesting a reading receipt from the recipient; and

if the request for a reading receipt is responded to by the recipient, generating a second digital signature corresponding to the contents of the reading receipt and sending the second digital signature to the sender.

56. (Original) A method of proving that an electronic message sent to a recipient was read, comprising:

receiving an electronic message along with a recipient's address;

calculating a message digest corresponding to the electronic message;

dispatching the electronic message electronically to the recipient's address;

requesting a reading notification;

upon receiving the reading notification, generating at least one reading receipt, the at

least one reading receipt including:

a copy of the message;

a first message digest for the corresponding electronic message: and

a second message digest for the reading notification from the recipient;

and

providing the reading receipt for later verification that said message was received by the recipient.

5 57. (Original) The method of claim 56 wherein the electronic message is provided by logging onto a registrant's server to create an e-mail message for the recipient by a sender.

E 1 58. (Original) The method of claim 57, further including:
sending the reading receipt to the sender of the electronic message.

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59. (Original) The method of claim 56, further including:
appending to the reading receipt any files accompanying the reading receipt; and
generating respective message digests for any of the accompanying files.

15 60. (Original) A method of validating the integrity of a purported copy of an electronic message, comprising:
receiving said purported electronic message copy, said purported copy including a digital signature and a transmission history associated therewith;
decrypting the digital signature;
20 generating a message digest based on content of the purported copy; and
validating the purported copy by comparing the decrypted digital signature and the message digest to determine whether the two match.

61. (Original) The method according to claim 60, further comprising:
if requested, providing sworn testimony verifying the content of the electronic message.

62. (Original) A method of registering an inbound electronic message, comprising:
5 generating a message digest corresponding to an inbound electronic message being sent
to a recipient's address;
encrypting the message digest to create a digital signature;
E1 appending the message digest to the contents of the inbound electronic message
to create a receipt;
10 transmitting the electronic message to the recipient address; and sending the receipt to an
archival storage means.

63. (Original) The method according to claim 62 wherein the electronic message is
an e-mail.

15 64. (Original) A method of registering an e-mail, comprising:
generating a message digest for content corresponding to the e-mail; encrypting the
message digest;
appending the encrypted message digest to the content of the e-mail to create a
20 receipt;
sending the e-mail; and
transmitting the receipt to a storage means for storage thereat.

65. (Original) A method of documenting delivery of an e-mail message comprising:
receiving an e-mail message from a sender;
forwarding the message to at least one designated recipient;
recording delivery information associated with the forwarding of the message to each

5 designated recipient;

computing a message digest corresponding to the said message and delivery information;
transmitting the message digest to the sender;
discarding the message; and
at a later time, examining said message, said delivery information, and said

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10 message digest, and providing third party verification services attesting that said message
was sent to the designated recipient at the time indicated within the delivery information.

66. (Original) The method of claim 65, further comprising:

performing the steps recited in claim VKI for each of a plurality of unrelated entities,

15 thereby providing independent third party e-mail authentication and verification services for said
entities.

67. (Original) The method of claim 65 further comprising:

programming a message transport agent associated with said sender to redirect outgoing

20 e-mail message originally addressed to said designated recipient, to a designated third party, and
to alter said message to include said designated recipient's email address;

and wherein said third party performs said forwarding, recording, computing, and
transmitting steps.

68. (Original) The method of claim 67 further comprising:
providing a flag which a message sender can set in order to designate a particular
outgoing message as a message to be registered.

5 69. (Original) The method of claim 65 further comprising:
advising the designated recipient that the message has been registered with a third party
verification service.

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10 70. (Original) The method of claim 65, further comprising:
charging the message sender a fee, said fee selected from the group comprising of a
monthly fee, another periodic fee, a fee based on amount of data registered, and a per-message
fee.

15 71. (Original) The method of claim 65, wherein said attesting is performed for a fee.

72. (Original) An electronic receipt for delivery of an electronic message, said
receipt comprising:

a body of an electronic message;

delivery information pertaining to a date and time that the electronic message body was

20 delivered to a computer associated with a designated addressee; and

a message authentication code computed from said message body and said delivery
information, said message authentication code being computed by an independent entity.

73. (Original) A method of providing electronic message registration services to the public, comprising:

providing a worldwide web site at which a user can input a message and designate a recipient by entering the recipient's electronic address;

5 receiving the message and the recipient's address via said website;

forwarding the message to the recipient's electronic address; and

providing secure documentation to the user pertaining to:

E 1 the message content; and

the date and time at which the message was forwarded to the recipient's electronic

10 address.

74. (Original) The method of claim 73 further comprising:

receiving delivery confirmation from a computer associated with said recipient's electronic address, and including said delivery confirmation as part of said secure

15 documentation.

75. (Original) The method of claim 74 further comprising:

receiving reading receipt information regarding when the designated recipient opened the electronic message for reading, and including said reading receipt information as part of said

20 secure documentation.

76. (Original) A method of providing e-mail message documentation services, comprising:

receiving an e-mail message from a message sender;

creating a copy of the message and appending to the message copy a tag advising that the

5 message has been registered with a third party e-mail registration service;

forwarding the tagged copy to a designated addressee; and

providing secure documentation to the message sender regarding content of the message

E 1 and delivery status information associated therewith.

10 77. (Original) A method of documenting delivery and content of an electronic message comprising:

recording electronic message protocol exchanges that effect delivery of the message to a destination mail transport authority (MTA);

assembling a copy of at least a first portion of the message, the protocol exchanges, an

15 authentication code corresponding to at least a second portion of the message, said assemblage defining an electronic receipt; and

transmitting the receipt to a storage means.

78. (Original) The method of claim 77 wherein said protocol exchanges comprise
20 simple mail transport protocol (SMTP) exchanges.

79. (Original) The method of claim 77 further comprising:

assigning a fictitious return address to the message in such a way that a receiving MTA will return delivery status notification (DSN) with sufficient information so as to enable determination of which message and which destination the DSN concerns merely by analysis of the DSN's return address and without otherwise relying on content of said message.

80. (Original) The method of claim 77 further comprising:

scanning subject lines and bodies of a return MTA notification to determine, by the presence of indicative phrases, whether the MTA notification

reports a successful delivery, a failed delivery, or the relay of the message to a non extended simple mail transport protocol (ESMTP) complaint mailer.

81. (Original) The method of claim 77 further comprising:

assembling and delivering a delivery report which, for each successful delivery of the message indicates whether the system is only able to verify on the basis of said recorded protocol exchanges, delivery of said message to a destination's mail server or, alternatively, whether the system is able to verify on the basis of an MTA notification, delivery of the message to an electronic mailbox corresponding to the destination.

82. (Original) A method of tracking delivering of a particular electronic message

comprising:

assigning a fictitious return address to the message, the fictitious return address containing sufficient information to identify the original message; and

requesting message delivery status notification so as to cause a device which receives the message to report delivery status information to the fictitious return address.

83. (Original) The method of claim 82 wherein:

5 said fictitious return address contains sufficient information to identify content of the message.

E 84. (Currently amended) A method of transmitting a message through the internet from a sender to a recipient through a server displaced from the recipient, including the steps at
10 the server of:

receiving the message at the server from the sender,

transmitting, ~~through the internet~~ from the server to an agent of the recipient, the message, an identification and an internet address of the server and the identity of the sender of the message,

15 receiving from the agent at the ~~server through the internet~~ recipient the identity and address of the agent and an indication of the receipt by the agent of the message and the 10 identification and internet address of the server and the identity of the sender, and

20 sending to the sender from the server through the internet a copy of the message and the information received by the server from the agent and a digital signature of the message received by the server from the agent of the ~~recipient~~ sender.

85. (Original) A method as set forth in claims 84 wherein
the indication received by the server through the internet from the agent includes an
identification of the agent and any transfer agent through whom the message has passed between
the server and the agent.

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86. (Currently amended) A method as set forth in claim 84 wherein
the server identifies any attachment to the message and wherein
the identity of the attachment is received by the server ~~through the internet~~ from the agent
and wherein

10 the server sends to the sender ~~through the internet~~ a copy of the attachment
received from the agent and a digital signature of the attachment.

87. (Currently amended) A method as set forth in claim 84 wherein
a digital signature of the message is provided at the server by creative, a hash of the
15 message and encryption the hash a plurality of digits in a unique sequence and is sent by the
server to the sender.

88. (Original) A method as set forth in claim 84 wherein
the server creates a message digest of the message and encrypts the message digest and
20 sends the encrypted message digest to the sender through the internet with the message, the
identification and e-mail address of the server and the identity of the sender.

89. (Original) A method as set forth in claim 84 wherein the message passes from the server to the agent through at least one mail transfer agent and wherein

the agent includes, in the information transmitted to the server, the identity and address of the at least one mail transfer agent and wherein

5 the server includes in the information transmitted to the sender the identity of the at least one mail transfer agent received by the server from the agent.

E 90. (Currently amended) A method of transmitting a message through the internet from a sender to a recipient through a server displaced from the recipient, including the steps at
10 the server of:

receiving the message at the server from the sender,

transmitting from the server ~~through the internet~~ to an agent of the recipient the message and the identity and ~~internet~~ address of the server and an indication representing the identity of the sender,

15 receiving at the server from the agent a handshaking and delivery history of the message from the server to the agent, and

transmitting from the server to the sender through the internet the message, a digital signature, ~~including a digital signature~~, of the message and the handshaking and delivery history of the message received ~~by the server~~ from the agent.

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91. (Currently amended) A method as set forth in claim 90 wherein
the server receives from the sender a copy of the information previously sent by the
server to the sender, this information including the digital signature and the message, when the
sender wishes to have the message authenticated by the server and wherein

5 the server does not retain a copy of the ~~the~~ sender, after the server transmits to the sender
through the internet the message, the digital signature of the message and the handshaking and
delivery history of the message.

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92. (Currently amended) A method as set forth in claim 91 [90] wherein

10 the server uses the information received by the server from the sender to create a digital
signature and compares the fingerprint of the message and a digital fingerprint of the digital
signature and compares these digital fingerprints to authenticate the message received by the
server from the sender.

15 93. (Original) A method as set forth in claim 90 wherein

the message includes an attachment and wherein

the server receives the attachment from the sender and wherein

the server transmits the attachment to the agent at the same time that the sender transmits
the message to the agent and wherein

20 the server receives from the agent the attachment at the same time that it receives the
message and the handshaking and delivery history of the message from the agent and wherein

the server transmits the attachment and a digital signature, including a digital fingerprint,
of the attachment to the sender at the same time that it transmits the digital signature of the
message to the sender.

94. (Original) A method as set forth in claim 90 wherein
the message is transmitted from the sender to the agent in an individual one of a variety of
recognized header formats and wherein

the server receives from the agent the digital signature of the message and the
5 handshaking and delivery history of the message with the header formed in the individual one of
the variety of recognized header formats.

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95. (Original) A method as set forth in claim 90 wherein

the server requests a delivery status notification from the agent relating to the message
10 when it transmits the message to the agent and wherein

the server receives the delivery status notification from the agent when it receives the
digital signature of the message from the agent.

96. (Original) A method as set forth in claim 90, including the step at the agent of:

15 indicating the delivery status of the message from the server in the transmittal from the
agent to the server through the internet.

97. (Currently amended) A method as set forth in claim 93, including the steps at the

20 server of:

receiving from the sender at the server through the internet, at the same time as the
receipt of a copy of the message from the sender to the server, a copy of any attachment to the
message, and

providing for a transmittal from the agent to the server through the internet of ~~the digital~~
25 ~~signature, including the digital fingerprint, of the attachment at the same time as the transmittal~~
of the message from the agent to the server.

98. (Currently amended) In a method of transmitting a message, ~~through the internet,~~
from a sender to a recipient through a server displaced from the recipient, the steps at the server
of:

receiving the message at the server from the recipient,

5 generating a hash constituting a synopsis of the message in coded form, encrypting the
hash with a particular encryption code to generate a digital signature [fingerprint] of the
message, and

E1 transmitting the message and the digital signature of the message ~~through the internet;~~ to
the sender.

10 99. (Currently amended) In a method as set forth in claim 98, the steps at the server of:

generating, for any attachment to the message, a hash constituting a synopsis of the
attachment in coded form,

15 encrypting the hash with a particular encryption code to generate a digital signature
of the attachment, and

transmitting the attachment and the digital signature of the attachment to the sender
~~through the internet~~ at the same time that the message and the digital

signature of the message are transmitted from the server to the sender through
the internet.

100. (Previously amended) In a method as set forth in claim 98, the steps at the server of:
removing the message and the digital signature of the message from the server after the
transmission of the message and the digital signature of the message from the server to the
sender.

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101. (Previously amended) In a method as set forth in claim 99, the steps at the server of:
removing the message and the digital signature of the message from the server after the
transmission of the message and the digital signature of the message from the server to the
sender, and

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10 removing the attachment, and the digital signature of the attachment, from the server after
the transmission of the attachment, and the digital signature of the attachment, from the server to
the sender.

15 102. (Previously amended) In a method as set forth in claim 98 [100], the step at the
server of:

receiving at the server from the sender the message, and the digital signature of the
message, previously transmitted from the server to the sender.

20 103. (Previously amended) In a method as set forth in claim 101, the step[s] of:
authenticating the message on the basis of the message, and the digital signature of the
message, transmitted from the sender to the server.

104. (Currently amended) In a method as set forth in claim 102, the step of:

authenticating at the server the message received by the server from the sender on the basis of the message and the digital signature of the message, transmitted from the sender to the server, the authentication being provided by generating the digital ~~signature~~ fingerprint of the message received by the server from the sender and the digital fingerprint of the digital signature by comparing the digital ~~signature~~ fingerprints and the received digital signature.

E 105. (Currently amended) In a method as set forth in claim 103, the step of:

authenticating at the server the message received by the server from the sender on the basis of the message, and the digital signature of the message, transmitted from the sender to the server, the authentication being provided by generating the digital ~~signature~~ fingerprint of the message received by the server from the sender and the digital fingerprint of the digital signature and by comparing the ~~generated~~ digital ~~signature~~ fingerprints and the ~~received digital signature~~ and by indicating the authentication when the ~~generated~~ digital ~~signature~~ and the ~~received digital signature~~ fingerprints are the same.

106. (Currently amended) In a method of transmitting a message ~~through the internet~~ from a sender to ~~an agent for the recipient~~ a designated address through a server displaced from the agent, the steps at the server of:

receiving the message at the server from the sender,
~~generating a hash constituting a synopsis of the message of the message in encoded form,~~
~~encrypting the hash with a particular encryption code to generate a digital fingerprint of~~
~~the message,~~

transmitting the message and the identity of the sender and the identity and internet 10
address of the server ~~through the internet~~ from the server to the agent,

receiving at the server ~~through the internet~~ any transmission ~~through the internet~~ from the
agent destination address concerning the message from the sender, and

5 determining from the transmission received by the server from the agent destination
address, or from the lack of any reception by the server ~~through the internet~~ from the agent, the
delivery status of the transmission by the server to the destination address agent and the delivery
status of any delivery of the message by the agent to the recipient.

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10 107. (Previously amended) In a method as set forth in claim 106, the steps at the server
of:

periodically examining the delivery status of the message transmitted to the agent and
the status of any delivery of the message by the agent to the recipient, and transmitting the
message and the digital signature of the message and the identity of the sender and the identity
15 and internet address of the server through the internet to the sender with an indication of the
delivery of the message to the agent when the server determines from the periodic examination
that the message has been delivered to the transport agent.

20 108. (Amended) A method of transmitting a message ~~through the internet~~ from a sender
to an agent for a recipient through a server displaced from the agent, including the steps at the
server of:

receiving the message at the server,

transmitting ~~through the internet~~ to an agent of the recipient the message and the identity of the sender and the identity and the internet address of the server,

receiving from the agent the message and the identity and ~~internet~~ address of the agent and the identity of the sender and the identity and internet address of the server,

5 providing a digital signature of what was received from the agent, and

providing to the sender the information received by the server from the agent and the digital signature of the information received by the server from the agent.

E 109. (Currently amended) A method as set forth in claim 108, including the steps at the

10 server of:

~~providing to the sender the message at the same time as the provision of the digital signature of the message to the sender, and~~

discarding the message provided to the sender and the information received by the server from the agent.

15 110. (Previously amended) A method as set forth in claim 108, including the steps at the server of:

receiving from the agent an indication of the date and time of the reception by the agent of the identity and internet address of the agent and the identity of the sender and the identity and
20 the internet address of the server, and providing to the sender the indication of the date and time of the reception by the agent of the identity and internet address of the agent and the identity of the sender and the identity and internet address of the server.

111. (Currently amended) A method as set forth in claim 108, including the steps at the server of:

receiving from the sender a copy of the message provided by the server and a copy of the digital signature of the message and the identity and internet address of the agent and the identity
5 of the sender and the identity and internet address of the server and the digital signature, and
generating a digital fingerprint from the digital signature,

generating a digital ~~signature~~ fingerprint of what has been received from the sender,
comparing the digital ~~signature~~ fingerprint ~~received by the sender and the digital signature~~
~~generated by the server~~, and

10 authenticating the message received from the sender on the basis of the comparison
provided at the server.

112. (Previously amended) A method as set forth in claim 108, including the steps at the server of:

15 forming at the server the digital signature of the message by providing a hash of the
message and then

113. (Previously amended) A method as set forth in claim 108, including the steps at the server of:

20 providing a digital signature of an attachment to the message, transmitting to the agent
the attachment at the same time as the transmittal of the 10 message, and

transmitting to the sender the digital signature of the attachment at the same time as the
transmission of the digital signature of the message to the sender.

114. (Currently amended) A method as set forth in claim 112, including the steps at the server of:

providing an indication of the date and time of the reception of the message from the agent, and

5 providing to the sender the indication of the date and time of ~~providing to the server the digital signature of the message from the agent at the time of providing to the sender the digital signature of the message~~ reception of the message at the server,

E¹ ~~providing to the sender the message at the same time as the provision of the digital signature of the message to the sender, and~~

10 discarding the message and the digital signature of the message provided to the sender, providing a digital signature of an attachment to the message,

transmitting to the sender the attachment at the same time as the transmittal of the message to the sender,

transmitting to the sender the digital signature of the attachment at the same time as the 15 transmission of the digital signature of the message to the sender,

receiving from the sender a copy of the message provided to the sender and a copy of the digital signature of the message ~~and~~ , the digital signature including, the digital signature including the identity and Internet address of the agent and the identity of the sender and the identity and internet address of the server,

20 generating a digital ~~signature of what has been received from the sender relating to the message~~ fingerprint of the message and a digital fingerprint of the digital signature of the message

comparing the digital ~~signature received from the sender and the digital signature~~
~~generated on the basis of what has been received from the sender relating to the message~~
fingerprint, and

5 authenticating the message received from the sender on the basis of the comparison
provided by the server.

E' 115. (Previously amended) In a method of transmitting a message from a sender to a
destination address through a server displaced from the destination address, the steps at the
server of:

10 receiving the message from the agent,
transmitting the message to the destination address,
receiving at the server an indication from the destination address that the message has
been received at the destination address from the server,
providing at the server a digital signature of the message, and
15 transmitting to the sender the message and the digital signature of the message for storage
by the sender.

20 116. (Previously amended) In a method as set forth in claim 115, the step at the server
of: discarding the message and the digital signature of the message after the transmission of the
message and the digital signature of the message to the sender.

117. (Currently amended) In a method as set forth in claim 116 the steps at the server of:

receiving from the sender copies of the message and the digital signature of the message,

5 ~~generating a digital signature on the basis of what has been received from the sender,~~

generating digital fingerprints of the message and the digital signature at the server

E 1 ~~comparing the digital signature of the message from the sender and the digital signature generated at the server and~~

10 authenticating the message on the basis of the results of the comparison.

118 (Currently amended) In a method as set forth in claim 115, the steps at the server of:

providing at the server, at the same time as the provision of the digital signature of the message at the server, an attachment including the identity of the sender and the identity and

15 ~~internet~~ address of the server and the ~~identity and internet~~ destination address of the agent, all as received by the server from the agent destination address,

generating a digital signature of the attachment, and

transmitting to the sender the attachment including the identity of the sender, the identity and ~~internet~~ address of the server and the ~~identity and internet~~ destination address of the agent

20 and the digital signature of the attachment, ~~all as received by the server from the agent~~, at the same time as the transmission of the message, and the digital signature of the message, to the sender.

Claim 119 (Currently amended) In a method as set forth in claim 115, the steps at the server of:

receiving an attachment from the ~~agent~~ destination address,

providing at the server a digital signature of the attachment,

5 transmitting to the sender, at the same time as the transmission of the message and the digital signature of the message, the attachment and the digital signature of the attachment.

E 1 Claim 120 (Currently amended) In a method as set forth in claim 119, the steps at the server of:

10 receiving from the sender copies of the message and the attachment ~~of the message~~ and the digital signatures of the message and the attachment,

generating digital fingerprints of the message and the digital signature of the message and digital fingerprints of the attachment and the digital signature of the attachment, and

15 comparing the digital fingerprints of the message and the digital signature of the message[[.]] and comparing the digital fingerprints of the attachment and the digital signature of the attachment[[.]] to authenticate the message and the attachment.

Claim 121 (Currently amended) In a method as set forth in claim 11[[9]][[5]], the steps at the server of

20 ~~the attachment constituting a first attachment,~~

~~receiving at the server from the agent, at the same time as the reception of the message and the attachment of the message from the agent, a second attachment including the identity of~~

~~the sender and the identity and internet address of the server and the identity and internet address of the agent, all as received by the server from the agent,~~

~~generating a digital signature of the second attachment, and~~

~~transmitting to the sender the second attachment including the identity of the sender, the~~

~~identity and internet address of the server, and the identity and internet address of the agent and a~~

~~digital signature of the second attachment, all as received by the server from the agent, at the~~

~~same time as the transmission to the sender of the message and the first attachment and the~~

~~digital signatures of the message and of the first attachment to the sender~~

receiving the message and the digital signature of the message at the server from the

sender, and

authenticating the message at the server on the basis of the message and the digital

signature received by the server from the sender.

122. (Currently amended) A method of transmitting a message ~~through the internet~~ from a sender to an agent for a recipient through a server displaced from the agent, including the steps of

providing the message from the sender at the server,

transmitting to the agent the message and the identity of the sender and the identity and the internet address of the server,

providing at the agent an indication of the status of the reception at the agent of the transmittal from the server to the agent of the message and the identity of the sender and the identity and internet address of the server,

transmitting to the server from the agent the message and the identity and internet address of the agent and the status of the reception at the agent of the message and the identity of the sender and the identity and internet address of the server, and

5 providing at the server a digital signature of what has been received by the server from the agent.

123. (Previously amended) A method as set forth in claim 122, including the steps of:

E) providing an attachment to the message,

10 transmitting the attachment to the agent at the same time as the transmittal of the message to the agent,

providing at the agent the status of the reception of the attachment at the same time as the provision at the agent of the status of the reception of the message,

15 transmitting to the server from the agent the status of the reception of the attachment at the same time as the transmittal to the server from the agent of the status of the reception of the message, and

providing at the server a digital signature of the attachment.

124. (Previously amended) A method as set forth in claim 122 wherein

20 the digital signature of the message includes a digital digest of the message and an encryption of the digital digest.

125. (Original) A method as set forth in claim 122 wherein
the agent includes in the transmission to the server the date and time of the transmission
by the agent to the server.

5 126. (Previously amended) A method as set forth in claim 122 wherein
the server transmits to the sender the message and of the message and the identity of the
sender and the identity and internet address of the server and the identity and internet address of
the agent and the status at the agent of the reception at the agent of the message and the digital
signature of what has been received by the server from the agent.

10 127. (Original) A method as set forth in claim 122 wherein
the delivery status of the message at the agent includes at least one of the following:
(a) DELIVERED, (b) RELAYED, (c) DELIVERED-AND-WAITING FOR DELIVERY
STATUS NOTIFICATION (DSN), (d) DELIVERED-TO-MAILBOX, and (e) FAILED,
15 UNDELIVERABLE.

128. (Currently amended) A method as set forth in claim 122 wherein
the digital signature of the message includes a digital digest of the message and an
encryption of the digital digest,
20 the agent includes the date and time of the transmission by the agent to the server, and
the server transmits to the sender the message and the digital signature of the message
and the identity of the sender and the identity and ~~internet~~ address of the agent and the delivery
status of the message and the date and time of the transmission by the agent to the server,, and

the delivery status of the message at the agent includes at least one of the following: (a) DELIVERED, (b) RELAYED, (c) DELIVERED-AND-WAITING FOR DELIVERY STATUS NOTIFICATION (DSN), (d) DELIVERED-TO-MAILBOX, and (e) FAILED, UNDELIVERABLE.

5

129. (Previously amended) A method as set forth in claim 128, including the steps of: providing at the server an attachment to the message, transmitting the attachment to the message to the agent at the same time as the transmittal of the message to the agent,

E' providing at the agent the status of the reception of the attachment at the same time 20 as the provision at the agent of the status of the reception of the message, and transmitting to the server from the agent the status of the reception of the attachment at the same time as the transmittal to the server from the agent of the status of the reception of the message.

130. (Currently amended) A method of transmitting a message through the internet from a sender to an agent for a recipient through a server displaced from the agent, including the steps at the server of:

providing at the server the message and the identity of the sender and the identity and internet address of the server,

transmitting to the agent the message and the identity of the sender and the identity 30 and internet address of the server,

receiving from the agent ~~the message and~~ the identity of the sender and the identity and internet address of the server and the identity and internet address of the agent and an indication of the status of the reception of the message at the agent, and

transmitting to the sender the message and the information received by the server from the agent relating to the message.

131. (Previously amended) A method as set forth in claim 130, including the steps at the
5 server of:

transmitting to the agent an attachment at the same time that the message is transmitted to the agent,

receiving from the agent the status of the reception at the agent of the attachment at the same time that the server receives from the agent the status of the reception at the agent of the
E 10 message, and

transmitting to the sender the attachment and the information received by the server from the agent relating to the attachment at the same time that the server transmits to the sender the message and the information received by the server from the agent relating to the message.

15 132. (Original) A method as set forth in claim 130 wherein the delivery status of the message at the agent includes at least one of the following: (a) DELIVERED, (b) RELAYED, (c) DELIVERED-AND-WAITING FOR DELIVERY STATUS NOTIFICATION (DSN), (d) DELIVERED-TO-MAILBOX, and (e) FAILED, UNDELIVERABLE.

20 133. (Original) A method as set forth in claim 130 wherein the server receives from the agent the date and time of the transmission by the agent to the server of the status of the reception of the message at the agent and wherein

the server transmits to the sender the date and time of the transmission by the agent of the status of the reception by the agent of the message at the same time that the server transmits to the sender the status of the reception by the agent of the message.

5 134. (Previously amended) A method as set forth in claim 133 wherein
the server also transmits to the sender the date and time of the transmission to the sender of the status of the reception by the agent of the attachment.

10 135. (Original) A method as set forth in claim 134 wherein
the server does not store the message after it transmits the message to the sender.

E 1 136. (Previously amended) A method as set forth in claim 134 wherein
the server transmits to the sender the identity of the sender and the identity and internet address of the server at the same time that it transmits the message to the sender and wherein the server authenticates the message on the basis of what it has received from the sender.

15 137. (Currently amended) A method as set forth in claim 134 wherein
the server transmits to the sender the identity and ~~internet~~ address of the agent and the status of the reception of the message, all as received by the server from the agent, and the digital signature of the message and wherein

20 the sender sends to the server, at the time that the sender wishes to have the message authenticated, what it has received from the sender and wherein

the server authenticates the message on the basis of what it has received from the sender after the sender wishes to have the message authenticated.

138. (Previously amended) A method as set forth in claim 136 wherein
the server does not store the message after it transmits the message to the sender and
wherein

the server transmits to the sender the message and the identity and internet address of the
5 agent and the status of the reception of the message received by the agent, all as received by the
server from the agent, and the digital signature of the message, and wherein

the server authenticates the message solely on the basis of what it has received from the
sender after the sender desires to authenticate the message.

E1
10 139. (Previously amended) A method of authenticating a message transmitted through the
internet from a sender to a recipient through a server displaced from the recipient, including the
steps at the server of:

transmitting to the sender the message and a digital signature of the message, and a status
of the reception of the message by an agent for the recipient,

15 receiving from the sender the message, the digital signature of the message and the status
of the reception of the message by the agent,

producing a digital signature of the information received from the sender, and

comparing the digital signature of the message produced from the information received
from the sender and the digital signature of the message generated by the server from the sender
20 to authenticate the message transmitted from the sender to the server.

140. (Previously amended) A method as set forth in claim 139 wherein
the server does not store the information, including the message, transmitted from the
server to the sender after the server transmits the information to the sender.

141. (Previously amended) A method as set forth in claim 139 wherein
5 the server provides a digital signature from an attachment including the identity of the
sender and the identity and the internet address of the server, and wherein
the server transmits to the sender the attachment including the identity of the sender and
the identity and internet address of the server, all as transmitted by the agent to the server, and
the digital signature of the attachment and wherein

E 10 the server receives from the sender the attachment including the identity and internet
address of the server and the digital signature of the attachment and wherein

the server generates digital fingerprints of the attachment, and the digital signature of the
attachment, received by the server from the sender and wherein

15 the server compares the digital fingerprints to authenticate the message transmitted by the
sender to the server.

142. ((Previously amended) A method of authenticating a message transmitted
through the internet from a sender to an agent for a recipient through a server displaced from the
agent, including the steps of:

20 generating a digital signature at the server of the message,

transmitting to the sender the message and the digital signature of the message and an
attachment including a status of a reception by the agent for the recipient of the message and a
digital signature of the attachment,

receiving at the server the information transmitted by the server to the sender,

25 generating digital fingerprints of the message and the attachments received by the server
and digital fingerprints of the digital signatures of the message and the attachment,

comparing the digital fingerprints generated by the server from the message received by the server from the sender and the digital signature of the message received by the server from the sender to authenticate the message transmitted from the sender to the server, and

comparing the digital fingerprints generated by the server from the attachment received
5 by the server from the sender and the digital signature of the attachment received by the server from the sender to authenticate the attachment transmitted from the sender to the server.

E 1
143. (Original) The method as set forth in claim 142 wherein
the server does not store the message after it transmits the message to the sender.

10
144. ((Previously amended) A method as set forth in claim 142 wherein
the server transmits to the sender the identity of the sender and the identity and internet
address of the server at the same time that it transmits the message and the digital signature of
the message to the sender and wherein

15 the sender transmits to the server the identity of the sender and the identity and the
internet address of the server at the same time that it transmits the message and the digital
signature of the message to the server and wherein

the server authenticates the message on the basis of the information that it receives from
the sender.

20
145. (Currently amended) A method of transmitting a message ~~through the internet~~
from a sender to ~~an agent~~ a destination address for a recipient through a server displaced from
the ~~agent~~ destination address, including the steps at the server of,
receiving the message from the sender,

transmitting the message to the destination address through a path including servers
between the server and the destination address, and

transmitting to the agent sender the message and ~~a return address identifying the sender~~
~~and the server, the path of transmission of the message between the server and the destination~~
5 address

~~receiving from the agent the identity of the sender and the server, and~~
~~identifying the message transmitted from the server to the agent and the identity of the~~
~~sender and the server as received by the server from the recipient.~~

E1

10 Claim 146 (Currently amended) A method as set forth in claim ~~145~~ 237 wherein

~~the server transmits to the sender the message and the identity of the sender and the~~
~~recipient and wherein~~

the server receives from the sender the message and the ~~identity of the sender and the~~
~~recipient~~ path of transmission of the message between the server and the destination address and

15 wherein

the server authenticates the message on the basis of ~~information transmitted by the sender~~
~~to the server after the receipt of the information by the server from the agent~~ the message and the
path of transmission of the message between the server and the destination address.

20 Claim 147 (Previously amended) A method as set forth in claim 146 wherein
the server does not retain the message after it transmits the message to the sender.

Claim 148 (Currently amended) A method as set forth in claim 145 wherein

the ~~recipient~~ destination address is one of a plurality of ~~recipients~~ destination addresses

25 receiving the message from the server ~~and wherein~~

~~the return address identifies the recipient from among the recipients in the plurality.~~

Claim 149 (Currently amended) A method as set forth in claim 145 wherein

~~the message has an attachment and wherein~~

5 the path of transmission of the message between the server and the destination address
includes the identity and address of the server and a recipient at the destination address ~~return~~
~~address also identifies the attachment to the message.~~

E 1
150. (Currently amended) A method as set forth in claim 146 wherein

10 the server does not retain the message after it transmits the message to the sender and
wherein

 the ~~recipient~~ destination address is one of a plurality of ~~recipients~~ destination addresses
receiving the message from the server and wherein

~~the return address identifies the recipient from among the recipients in the plurality and~~

15 ~~wherein~~

 the message has an attachment and wherein

~~the return address also identifies the attachment to the message~~ attachment identifies the
path of transmission of the message between the server and the destination address.

20 151. (Previously amended) In a method of identifying a sender's message transmitted
from a server to an agent for a recipient, the steps at the server of:

 transmitting to the sender a return address received by the server from the agent and
identifying the message, the sender and the recipient,

receiving from the sender the return address transmitted by the server to the sender and identifying the message, the sender and the recipient, and

authenticating the message on the basis of the information transmitted by the sender to the server.

5

E 152. (Previously amended) In a method as set forth in claim 151 wherein the server transmits to the sender the message at the same time that it transmits the return address to the sender and wherein

the server does not retain the message after it transmits the message to the sender.

10

153. (Previously amended) In a method as set forth in claim 151 wherein the recipient is an individual one of a plurality of recipients receiving the message from the server and wherein

the return address identifies the individual one of the recipients in the receiving the plurality receiving the message.

15

154. (Previously amended) In a method as set forth in claim 151 wherein the message has an attachment and wherein the return address identifies the attachment to the message.

20

155. (Previously amended) In a method as set forth in claim 152 wherein the recipient is an individual one of a plurality of recipients receiving the message from the server and wherein

the return address identifies the individual one of the recipients in the plurality receiving the message and wherein the message has an attachment and wherein the return address identifies the attachment to the message.

5 156. (Previously amended) A method of transmitting a message through the internet from a sender to an agent for a recipient through a server displaced from the recipient, including the steps at the agent of:

E1 receiving from the server through the internet the message and the identity of the sender and the identity and internet address of the server, and

10 providing for a transmittal to the server through the internet the message and the identity of the sender and the identity and internet address of the sender and the identity and internet address of the agent.

15 157. (Previously amended) A method as set forth in claim 156, including the step at the agent of:

indicating in the transmittal from the agent to the server whether or not the message has been delivered by the agent to the recipient.

20 158. (Previously amended) A method as set forth in claim 156, including the step at the agent of:

indicating in the transmittal from the agent to the server that the message and the identity of the sender and the identity and internet address of the server have been sent by the agent to another agent for delivery to the recipient.

Claim 159 (Currently amended) A method of providing a delivery at a ~~first~~ server of an electronic message from the ~~first~~ server to a destination address, including the steps of:

receiving at the ~~first~~ server an electronic message from a ~~message~~ sender for ~~routing~~ transmission to the destination address,

5 transmitting the electronic message from the ~~first~~ server to ~~a destination server~~ for the destination address via a protocol selected from a group consisting of an SMTP protocol and an ESMTP protocol, and

E1 ~~recording~~ receiving at the ~~first~~ server the ~~transactions~~ transmission of the electronic message between the ~~first~~ server and the destination ~~server in the~~ address via the selected one of
10 the protocols.

Claim 160. (Currently amended) A method as set forth in claim 159, including the step[[s]] of:

including[[.]] in the ~~transactions~~ transmission between the ~~first~~ server and the destination
15 ~~server~~ address via the selected one of the protocols, the identity of the sender, the identity and ~~internet~~ address of the ~~first~~ server and the ~~identity and internet~~ destination address of the ~~destination server~~.

Claim 161. (Currently amended) A method as set forth in claim 159, including the steps
20 of:

providing ~~transactions between~~ a transmission of the message from the ~~first~~ server ~~and to~~ the sender,

including, in the ~~transactions~~ transmission from between the first server and to the sender,
a digital signature of the ~~transmission~~ of the electronic message ~~between the first server and the~~
~~destination server via the selected protocol~~.

5 Claim 162. (Currently amended) A method as set forth in claim 159, including the step
of:

E 1
recording, in the ~~transactions~~ transmission between the ~~first~~ server and the destination
~~server~~ address via the selected one of the protocol[[s]], the time for the ~~sending~~ transmission of
the message from the ~~first~~ server to the destination ~~server~~ address and the time for the receipt of
10 the message ~~by~~ at the destination ~~server~~ address.

Claim 163. (Currently amended) A method as set forth in claim 160, including the steps
of:

~~providing transactions between the first server and the sender, and~~

15 including, in the transmission of the message between the ~~first~~ server and the sender[[.]] a
digital signature of the transmission of the electronic message between the ~~first~~ server and the
destination ~~server~~ address via the selected one of the protocol[[s]], and

recording, in the ~~transactions~~ transmission between the ~~first~~ server and the destination
~~server~~ address via the selected one of the protocol[[s]] the time for the ~~sending~~ transmission of
20 the message from the ~~first~~ server to the destination ~~server~~ address and the time for the receipt of
the message ~~by~~ at the destination ~~server~~ address.

Claim 164 (Currently amended) A method as set forth in claim 159, including the step of:

including[[.]] in the ~~transactions~~ transmission of the message between the ~~first~~ server and the destination ~~server~~ address via the selected one of the protocol[[.s.]] the status of the delivery of the message ~~to~~ at the destination ~~server~~ address from the ~~first~~ server.

Claim 165 (Currently amended) A method as set forth in claim 159, including the step of:

receiving at the ~~first~~ server a delivery status notification relating to the status of the delivery of the message ~~to~~ at the destination ~~server~~ address and the delivery of the message from the destination ~~server~~ address to ~~the~~ a recipient.

Claim 166 (Currently amended) In a method of verifying at a first server a delivery of an electronic message to a destination server for a recipient, the steps at the first server of:

transmitting the electronic message from the first server to the destination server ~~through a transaction between the first server and the destination server~~ via a protocol selected from the group consisting of an SMTP protocol and an ESMTP protocol,

receiving[[.]] at the first server from the destination server[[.]] the ~~transactions~~ transmission between the first server and the destination server via the selected one of the protocols, and

transmitting from the first server to the sender the message and the ~~transactions~~ transmission between the first server and the destination server ~~in~~ via the selected one of the protocols.

Claim 167 (Currently amended) In a method as set forth in claim 166, the step of:
transmitting from the first server to the sender ~~a copy of the message~~ at the time of the
~~transaction~~ completion of the transmission of the message between of the first server and the
destination server ~~in~~ via the selected one of the protocols.

5

Claim 168 (Currently amended) In a method as set forth in claim 166, the
step of:

E1 ~~retaining~~ discarding the message at the first server after the transmission of the message
in the selected one of the protocols by the first server to the ~~destination server~~ sender.

10

Claim 169 (Currently amended) In a method as set forth in claim 166, the steps of:
providing at the first server a digital signature of the message, and
transmitting the digital signature of the message from the first server to the sender at the
time of the transmission of the ~~transaction in the selected one of the protocols~~ message from the
15 first server to the sender.

Claim 170 (Currently amended) In a method as set forth in claim 169, the steps of:
transmitting from the first server to the sender ~~a copy of the message~~ after of the
transmission ~~to the sender of the transaction~~ of the message between the first server and the
20 destination server ~~in~~ via the selected one of the protocols, and

releasing the message at the first server after the transmission of the ~~copy of the message~~
~~in~~ via the selected one of the protocols by the first server to the sender.

Claim 171 (Previously amended) In a method as set forth in claim 170, the step of:

transmitting between the first server and the destination server the identity of the sender,
the identity and address of the first server and the identity and address of the destination server
and the time of the receipt of the message by the first server and the time of the transmission to
5 the first server from the destination server of the identity of the sender, the identity and address
of the first server and the identity and address of the destination server.

E) Claim 172 (Previously amended) In a method as set forth in claim 166, the step of:

receiving at the first server from the destination server a delivery status notification
10 indicating the status of the delivery of the message from the first server to the destination server
and the time of the transmission of the delivery status notification by the destination server to the
first server.

Claim 173 (Currently amended) In a method of verifying at a first server a message
15 received by the first server from a sender and transmitted by the first server to a destination
server for a recipient, the steps of:

receiving at the first server from the destination server an attachment including
~~transactions~~ transmissions between the first server and the destination server relating to the
message from the sender, the ~~transactions~~ transmissions between the first server and the
20 destination server being provided via a protocol selected from the group consisting of an SMTP
protocol and an ESMTP protocol,

transmitting from the first server to the sender the message and the attachment including the ~~transactions~~ transmissions between the first server and the destination server via the selected one of the SMTP protocol and the ESMTP protocol,

transmitting from the sender to the first server the message and the attachment including
5 the ~~transactions~~ transmissions via in the selected one of the SMTP and ESMTP protocols, and

authenticating the message on the basis of the message and the attachment including the ~~transactions transmitted from the sender to the first server~~ transmission via in the selected one of the SMTP and ESMTP protocols.

E1
10 Claim 174 (Currently amended) In a method as set forth in claim 173, ~~the step of~~
wherein:

~~authenticating the message transmitted from the sender to the first server when the~~
~~comparison is identical~~ the attachment includes transmissions between servers intermediate, the
first server and the destination server.

15 Claim 175 (Currently amended) In a method as set forth in claim 17[[0]]3, the step of:
removing the message from the first server when the first server transmits to the sender
the message and ~~an~~ the attachment including the ~~transactions~~ transmissions between the first
server and the destination server via the selected one of the SMTP protocol and the ESMTP
20 protocol.

Claim 176 (Currently amended) In a method as set forth in claim 173, the steps of:

receiving at the first server from the destination server the ~~indication~~ transmission of the identity of the sender, the identity and address of the first server and the identity and address of the destination server via the protocol selected from the group consisting of the SMTP protocol and the ESMTP protocol, and

transmitting from the first server to the sender the identity of the sender, the identity and address of the first server and the identity and address of the destination server at the time of the transmission from the first server to the sender of the message and the ~~transaction~~ transmission between the first server and the destination server via the protocol selected from the group consisting of the SMTP protocol and the ESMTP protocol.

Claim 177 (Currently amended) In a method as set forth in claim 175[[3]], the steps of providing at the first server [[a]] digital signature[[s]] of the message and the attachment including the ~~transactions~~ transmission between the first server and the destination server relating to the message from the sender, and

transmitting from the first server to the sender the message and the digital signature[[s]] of the message and the attachment ~~including the transactions between the first server and the destination server via the selected one of the SMTP protocol and the ESMTP protocol and the digital signature of the attachment.~~

Claim 178 (Currently amended) In a method as set forth in claim 173, the steps of:

transmitting from the first server to the sender the identity of the sender, the identity and address of the first server and the identity and address of the destination server at the time that

the message and the ~~transactions~~ transmissions between the first server and the destination server are transmitted from the first server to the sender,

transmitting from the sender to the first server the information transmitted from the first server to the sender, and

5 authenticating the message at the first server on the basis of the information transmitted from the sender to the first server and representing the information previously transmitted from the first server to the sender.

E1
Claim 179 (Currently amended) A method of verifying delivery at a first server of an

10 electronic message to a destination server for a recipient, including the steps of:

receiving at the first server an electronic message from a message sender for ~~routing~~ transmission to the destination server,

~~establishing at the first server a communication with the destination server,~~

transmitting the electronic message from the first server ~~the electronic message~~ to the
15 destination server ~~with a protocol transaction~~ via a protocol selected from a group consisting of an SMTP protocol and an ESMTP protocol,

receiving at the first server the ~~protocol transactions~~ transmissions between the first server and the destination server via the selected one of the SMTP and ESMTP protocols ~~relating to the message~~, and

20 transmitting from the first server to the sender the message and at least a particular portion of the ~~protocol transactions~~ transmissions between the first server and the destination server via the selected one of the SMTP and ESMTP protocols.

Claim 180 (Currently amended) A method as set forth in claim 179 wherein
the message and the at least particular portion of the ~~transactions~~ transmissions
~~in~~ via the selected one of the SMTP and ESMTP protocols to the sender are provided by the
sender to the first server, and wherein

5 the message is authenticated by the first server on the basis of the message and the at
least particular portion of the ~~transactions~~ transmissions from the sender to the first server.

E1
Claim 181 (Currently amended) A method as set forth in claim 17[[8]][[9]] wherein
a digital signature is ~~made~~ provided of the message at the first server and wherein
10 the digital signature is transmitted from the first server to the sender with the message
and the at least particular portion of the ~~protocol transactions~~ transmissions between the first
server and the destination server and wherein

the digital signature is thereafter provided by the sender to the first server with the
message and the at least particular portion of the ~~transactions~~ transmissions ~~in~~ via the selected
15 one of the SMTP and ESMTP protocol[[s]].

Claim 182 (Currently amended) A method as set forth in claim 180 wherein
a digital signature of the message and a digital signature of the ~~transactions~~ transmissions
provided ~~in~~ via the selected one of the SMTP and ESMTP ~~the selected~~ protocol[[s]] are produced
20 at the first server and are transmitted to the sender with the message and the ~~transactions~~
transmissions provided ~~in~~ via the selected one of the SMTP and ESMTP protocol[[s]] and
wherein

the digital signatures and the message and the at least particular portion of the
~~transactions~~ transmissions ~~provided in~~ via the selected one of the SMTP and ESMTP
protocol[[s]] to the sender are thereafter provided by the sender to the first server and wherein
digital fingerprints are produced at the first server from the message and the digital
5 signature of the message provided by the sender to the first server and wherein
the message is authenticated at the first server by establishing an identity between the
digital fingerprints produced at the first server.

E1
Claim 183 (Currently amended) A method of verifying at a first server the delivery of an
10 electronic message from the first server to a destination server for a destination address including
the steps of:

receiving at the first server an electronic message from a message sender for ~~routing~~
transmission to the destination server,

transmitting the electronic message from the first server to the destination server ~~the~~
15 ~~electronic message~~,

receiving at the first server the ~~transactions~~ transmissions between the first server and the
destination server via ~~the~~ a protocol selected from the group consisting of the SMTP protocol
and the ESMTP protocol,

transmitting from the first server to the sender the message and the ~~transactions~~
20 transmission between the first server and the destination server ~~in~~ via the selected one of the
protocols,

receiving at the first server from the sender the message[[s]] and the ~~transactions~~
transmission between the first server and the destination server ~~in~~ via the selected one of the
protocols, and

5 authenticating the message at the first server on the basis of the message received by the
first server from the sender and the ~~transactions~~ transmissions received by the first server from
the sender.

E' 184. (Previously amended) A method as set forth in claim 122, including the step of:
the transactions between the first server and the destination server constituting an
attachment,

10 providing digital signatures at the first server of the message and the attachment, and
transmitting from the first server to the sender the message and the attachment and the
digital signatures of the message and the attachment.

15 185. (Currently amended) A method as set forth in claim 184, including the step of:
transmitting to the first server from the sender what has been received at the sender from
the first server, this transmission occurring when the sender wishes to authenticate the message,
and

20 authenticating the message at the first server on the basis of the message and the
attachment and the digital signatures of the message and the attachment, all as received by the
server from the sender.

186. (Original) A method as set forth in claim 137 wherein
the server provides a digital signature on the basis of what it has received from the sender
after the sender wishes to have the message authenticated and wherein

the server compares the digital signature that it has received from the sender and the digital signature that it has created from the information received from the sender and wherein the server authenticates the message when the comparison is favorable.

5 Claim 187 (Currently amended) A method as set forth in claim 163, including the steps of:

transmitting from the sender to the ~~first~~ server the information transmitted from the ~~first~~ server to the sender, and

E1 authenticating the electronic message on the basis of the information transmitted from the sender to the ~~first~~ server ~~representing the transactions between the first server and the destination address via the selected protocol.~~

Claim 188 (Currently amended) A method as set forth in claim 163, including the steps of:

15 providing a digital signature of the message and a digital signature of an attachment including the ~~transactions~~ transmissions between the ~~first~~ server and the destination server via the selected one of the protocol[[s]], and

transmitting the digital signature of the message and the digital signature of the attachment from the ~~first~~ server to the sender at the same time that the message and the
20 attachment are transmitted from the ~~first~~ server to the sender.

Claim 189 (Currently amended) A method as set forth in claim 172, including the steps of:

generating at the first server a digital signature of the message and a digital signature of the attachment including the ~~transactions transmitted from~~ transmission between the first server
5 and the destination server sender to the first via the selected one of the protocols server, and
transmitting from the first server to the sender the message and the attachment and the digital signatures of the message and the attachment.

E¹
10 Claim 190 (Currently amended) A method as set forth in claim 173, including the steps of:

providing a digital signature of the message and a digital signature of the attachment including the ~~transactions~~ transmission between the first server and the destination server via the selected one of the protocol[[s]], and

15 transmitting the digital signatures from the first server to the sender at the same time as the transmission from the first server to the sender of the message and the attachment including the ~~transactions~~ transmission via the selected one of the protocol[[s]].

Claim 191 (Currently amended) A method as set forth in claim 189, including the steps of:

20 transmitting from the sender to the first server the message and the digital signature of the message and the attachment and the digital signature of the attachment including the ~~transactions~~ transmissions between the first server and the destination server ~~in~~ via the selected one of the protocols, and

authenticating the message on the basis of the digital signatures and the message and the attachment transmitted ~~between~~ from the sender ~~and to~~ the first server in via the selected one of the protocols.

5 192. (Previously amended) A method of authenticating a message transmitted from a sender to a recipient, including the steps at the server of:

providing a digital signature of the message,

transmitting the message and the digital signature to the sender,

receiving the message and the digital signature from the sender, and

10 authenticating the message on the basis of the message and the digital signature received by the server from the sender.

193. (Previously amended) A method as set forth in claim 192, wherein
the server prepares a digital signature of the message and a digital signature of an
15 attachment including an identification of the sender and an identification and address of the server and an identification and address of the recipient and a digital signature of the attachment and wherein

the server transmits to the sender the message and the digital signature of the message and the attachment including the identification of the sender and the identification and address of the
20 server and the identification and address of the recipient and the digital signature of the attachment and wherein

the server receives from the sender the message and the digital signature of the message and the attachment and the digital signature of the attachment and wherein

the server authenticates the message on the basis of the message and the digital signature of the message and the attachment and the digital signature of the attachment all as received by the server from the sender.

5 194. (Previously amended) A method as set forth in claim 192 wherein
the server prepares a digital signature of the message and an attachment including a
selected one of the SMPT and ESMTP protocols involved in the transmission of the message
from the server to the recipient and a digital signature of the attachment and wherein
10 the server transmits to the sender the message and the digital signature of the message and
the attachment including the selected one of the SMPT and ESMTP protocols and the digital
signature of the attachment and wherein
the server receives from the sender the message and the digital signature of the message
and the attachment and the digital signature of the attachment and wherein
the server authenticates the message on the basis of the message and the digital signature
15 of the message received by the server from the sender.

195. (Previously amended) A method as set forth in claim 192 wherein
the server authenticates the message by preparing a digital fingerprint of the message and
a digital fingerprint of the digital signature and by comparing the prepared digital fingerprints of
20 the message and the digital signature of the message and confirming that they are identical.

196. (Previously amended) A method as set forth in claim 194 wherein
the server authenticates the message by preparing a digital fingerprint of the message and
a digital fingerprint of the attachment including the identification of the sender and the
25 identification and address of the server and the identification and address of the recipient and by
comparing the prepared digital fingerprint of the message and the digital signature of the
message and confirming that they are identical and by comparing the prepared digital

fingerprints of the attachment and the digital signature of the attachment and confirming that they are identical.

197. (Previously amended) A method as set forth in claim 194 wherein
5 the server authenticates the attachment by preparing a digital fingerprint of the attachment and a digital fingerprint of the digital signature of the attachment including the selected one of the SMTP and ESMTP protocols and by comparing the digital fingerprints and confirming that they are identical.

E 1
10 198. (Previously amended) A method as set forth in claim 194 wherein
the server transmits the message and the attachment and the digital signatures of the message and the attachment to the sender without retaining a copy of the message and the attachment and the digital signatures of the message and the attachment.

15 199. (Previously amended) A method as set forth in claim 194 wherein
the server transmits to the sender the message and the attachment and the digital signatures of the message and of the attachment and the identification of the sender and the identification and address of the server and the identification and address of the recipient without retaining any of this information.

20 200. (Previously amended) A method as set forth in claim 197 wherein
the server transmits to the sender the message and the digital signature of the message and the attachment including the selected one of the SMTP and ESMTP protocols and the digital
25 signature of the attachment without retaining any of this information.

201. (Currently amended) A method of transmitting a message ~~through the internet~~ from a sender to a recipient through a server displaced from the recipient, including the steps at the server of:

transmitting to the recipient the message and an attachment including an identification of the sender and an identification and address of the server and an identification and address of the recipient,

receiving from the recipient the identification of the sender and an identification and address of the server and an identification and address of the recipient, and

transmitting to the sender the message and the attachment including the identification of the sender and the identification and address of the server and the identification and address of the recipient.

202. (Previously amended) A method as set forth in claim 201 wherein the server prepares a digital signature of the message and transmits the digital signature of the message to the sender with the message.

203. (Previously amended) A method as set forth in claim 202 wherein the server does not retain a copy of the message and the digital signature of the message when it transmits the message and the digital signature of the message to the sender.

204. (Previously amended) A method as set forth in claim 202 wherein the server prepares a digital signature of the attachment and transmits this digital signature of the attachment to the sender at the same time that it transmits the attachment to the sender and wherein the sender transmits to the server the message and the digital signature of the message and the attachment and the digital signature of the attachment when the sender desires to obtain an authentication of the message and the attachment.

205. (Previously amended) A method as set forth in claim 204 wherein the server provides an authentication of the message and the attachment and the digital signatures of the message and the attachment, all as received by the server from the sender.

5 206. (Previously amended) A method of transmitting a message through the internet from a sender to a recipient through a server displaced from the recipient, including the steps at the server of:

E 1 transmitting to the recipient the message and an identification of the sender and a
10 protocol selected from a group consisting of SMPT and ESMTP protocols.

receiving from the recipient the selected one of the protocols, and
transmitting to the sender the message and the selected one of the protocols.

207. (Original) A method as set forth in claim 206, including the steps of:

15 preparing at the server a digital signature of the message, and
transmitting the digital signature from the server to the sender with the message.

208. (Currently amended) A method as set forth in claim 206, including the step of:

transmitting a digital signature of the message from the server to the sender, and

20 not retaining at the server a copy of the message and the digital signature when the server transmits the message and the digital signature of the message to the sender.

209. (Previously amended) A method as set forth in claim 206, including the step of:

25 preparing at the server a digital signature of the message and a digital signature of the selected one of the protocols, and

transmitting the digital signatures from the server to the sender with the message and the selected one of the protocols.

210. (Previously amended) A method as set forth in claim 207, including the steps of:

5 preparing at the server a digital signature of the [message and] of the selected one of the protocols, and

E transmitting the digital signature of the message from the server to the sender with the message and the digital signature of the selected one of the protocols with the protocol, and

10 not retaining at the server a copy of the message and the digital signature of the message and the selected one of the protocols and the digital signature of the selected one of the protocols when the server transmits the message and the digital signature of the message and the selected one of the protocols and the digital signature of the selected one of the protocols to the sender.

211. (Original) A method as set forth in claim 208, including the steps of:

15 transmitting the message and the digital signature of the message from the sender to the server, and

authenticating the message on the basis of the message and the digital signature transmitted from the sender to the server.

20 212. (Original) A method as set forth in claim 210, including the steps of:

transmitting from the sender to the server the message, the digital signature of the message, the attachment and the digital signature of the attachment, and

25 authenticating the message on the basis of the message and the digital signature of the message transmitted from the sender to the server and authenticating the attachment on the basis of the attachment and the digital signature of the attachment transmitted from the sender to the server.

213. (Original) In a method of authenticating a message transmitted through the internet by a server from a sender to an agent of a recipient, the steps at the server of:

transmitting to the recipient the message and an attachment including the identity of the sender and the identity and address of the server and the identity and address of the recipient, and
5 receiving the indication by the agent of the receipt of the message by the agent, and including the indication of the receipt of the message by the agent in the attachment.

E 1
214. (Original) In a method as set forth in claim 213, the step at the server of:
10 creating a digital signature of the message and a digital signature of the attachment.

215. (Original) In a method as set forth in claim 214, the step at the server of:
transmitting to the sender the message and the digital signature of the message and the attachment and the digital signature of the attachment.

15 216. (Original) In a method as set forth in claim 215, the step at the server of:
receiving from the sender the message and the attachment and the digital signatures of the message and the attachment.

20 217. (Original) In a method as set forth in claim 216, the step at the server of:
authenticating the message on the basis of the message and the attachment and the digital signature of the message and the attachment, all as received by the server from the sender.

218. (Original) In a method of authenticating a message transmitted through the internet by a server from a sender to an agent of recipient, the steps at the server of:
25 receiving from the agent a protocol selected from a group consisting of SMTP and ESMTP protocols after the transmission of the message from the server to the agent of the message by the selected one of the protocols, and

providing at the server a digital signature of the message, and
transmitting the message and the digital signature of the message from the server to the
sender.

5 219. (Original) In a method as set forth in claim 218, the step of:
disposing of the message and the digital signature of the message at the server after the
transmission of the message and the digital signature of the message from the server to the
sender.

E 1
10 220. (Original) In a method as set forth in claim 219, the steps of:
receiving at the server the message and the digital signature of the message after the
disposition of the message and the digital signature of the message at the server, and
authenticating the message at the server on the basis of the message and the digital
signature of the message received by the server from the sender.

15 221. (Original) In a method as set forth in claim 218, the steps of:
providing an attachment including the selected one of the protocols,
providing a digital signature of the attachment, and
transmitting from the server to the sender the attachment and the digital signature of the
20 attachment at the same time as the transmission of the message and the digital signature of the
message from the server to the sender.

25 222. (Original) In a method as set forth in claim 221, the step of:
disposing of the message and the attachment and the digital signature of the message and
the attachment at the server after the transmission of the message and the digital signature of the
message and the attachment and the digital signature of the attachment from the server to the
sender.

223. (Original) In a method as set forth in claim 222, the steps of:

receiving at the server from the sender the message, the attachment and the digital signatures of the message and the attachment after the disposition of the message and the digital signature of the message and the attachment and the digital signature of the attachment at the server, and

authenticating the message and the attachment at the server on the basis of the message and the digital signature of the message and the attachment and the digital signature of the attachment, all as received at the server from the sender.

224. (Original) In a method as set forth in claim 220 wherein

the authentication is provided by generating at the server a digital fingerprint of the message, and a digital fingerprint of the digital signature of the message, received by the server from the sender and comparing the digital fingerprints generated at the server.

225. (Original) In a method as set forth in claim 223 wherein

the authentication is provided as follows:

generating at the server a digital fingerprint of the message from the message received by the server from the sender, and a digital fingerprint of the digital signature of the message received at the server, and comparing the digital fingerprints generated at the server, and

generating at the server a digital fingerprint of the attachment, and a digital fingerprint of the digital signature of the attachment, received at the server from the sender, and comparing the digital fingerprints generated at the server.

226. (New) In a method of authenticating a message provided by a sender and transmitted to a destination server by a second server displaced from the sender and the destination server, the steps at the second server of:

5 providing an attachment transmitted between the second server and the destination server via a selected one of SMTP and ESMTP protocols, and
transmitting the attachment from the second server to the sender.

227. (New) In a method as set forth in claim 226, the steps at the second server of:

E1
10 providing a digital signature of the attachment at the second server, and
transmitting the digital signature from the second server to the sender at the time of
transmitting the attachment from the second server to the sender.

228. (New) In a method as set forth in claim 227, the steps at the second server of:

15 receiving the attachment and the digital signature at the second server from the sender,
and
authenticating the attachment at the second server on the basis of the attachment and the
digital signature received by the second server from the sender.

229. (New) In a method as set forth in claim 227, the steps at the second

20 server of:
receiving the attachment and the digital signature at the second server from the sender,

providing at the second server digital fingerprints of the attachment and the digital signature received at the second server from the sender, and
comparing the digital fingerprints to authenticate the attachment.

5 230. (New) In a method of authenticating a message provided by a sender and transmitted to a destination server by a second server displaced from the sender and the destination server, the steps at the second server of:

E' providing an attachment including the identity and address of the sender and the identity and address of the second server and the identity and address of the destination server, and
10 transmitting the attachment from the second server to the sender.

231. (New) In a method as set forth in claim 230 wherein
the attachment includes the address and identity of intermediate stations receiving the attachment in the transmission of the message between the second server and the destination
15 server.

232. (New) In a method as set forth in claim 230, the steps at the second server of:
providing a digital signature of the attachment at the second server, and
transmitting the digital signature from the second server to the sender at the time of
20 transmitting the attachment from the second server to the sender.

233. (New) In a method as set forth in claim 231, the steps at the second server of:
providing a digital signature of the attachment at the second server, and

transmitting the digital signature from the second server to the sender at the time of
transmitting the attachment from the second server to the sender.

234. (New) In a method as set forth in claim 232, the steps at the second server of:
5 receiving the attachment and the digital signature at the second server from the sender,
and
authenticating the attachment at the second server on the basis of the attachment and the
digital signature received by the second server from the sender.

E
10 235. (New) In a method as set forth in claim 233, the steps at the second server of:
authenticating the attachment at the second server on the basis of the attachment and the
digital signature received by the second server from the sender.

236. (New) In a method as set forth in claim 232, the steps at the second server of:
15 receiving the attachment and the digital signature at the second server from the sender,
providing at the second server digital fingerprints of the attachment and the digital
signature received at the second server from the sender, and
comparing the digital fingerprints to authenticate the attachment.

20 237. (New) In a method as set forth in claim 233, the steps at the second server of:
receiving the attachment and the digital signature at the second server from the sender,

providing at the second server digital fingerprints of the attachment and the digital
signature received at the second server from the sender, and
comparing the digital fingerprints to authenticate the attachment.

5 238 (New) In a method of verifying at a server a delivery of an electronic message to
a destination address, the steps of:

transmitting the electronic message between the server and the destination address,
receiving at the server the path of transmission of the message between the server and the
E1 destination address, the path including servers between the server and the destination address,

10 and

transmitting to the sender the message and the path of transmission of the message
between the server and the destination or address.

15 239. (New) In a method as set forth in claim 238 wherein
the server does not retain the message or the path of transmission of the message between
the server and the destination address after the server transmits to the sender the message and the
path of transmission of the message between the server and the destination address.

20 240. (New) In a method as set forth in claim 238 wherein
the server receives from the sender the message and the path of
transmission of the message between the server and the destination address and wherein

the server authenticates the message on the basis of the message, and the path of transmission of the message between the server and the destination address, received by the server from the sender.

5 241. (New) In a method as set forth in claim 240 wherein
the server provides a digital signature of the message and transmits the digital
signature with the message to the sender and wherein
the server receives from the sender the message and the digital signature of the
message and wherein

E' 10 the server provides digital fingerprints of the message and the digital signature and
compares the digital fingerprints to authenticate the message.

 242. (New) In a method as set forth in claim 240 wherein
the server provides a digital signature of the path of transmission of the message
15 between the server and the destination address and transmits the digital signature to the sender
with the path of transmission and wherein
the server receives from the sender the path of transmission and the digital signature of
the path of transmission and wherein
the server provides digital fingerprints of the path of transmission and the digital
20 signature of the path of the transmission and compares the digital fingerprints to authenticate the
message.